



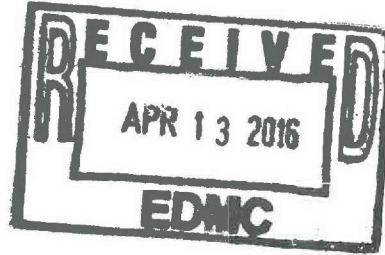
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STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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April 11, 2016

16-NWP-066



Mr. Kevin W. Smith, Manager  
Office of River Protection  
United States Department of Energy  
PO Box 450, MSIN: H6-60  
Richland, Washington 99352

Re: Department of Ecology's (Ecology) Response Comments for the *Tier 1 Closure Plan Single-Shell Tank (SST) System*, RPP-RPT-58858, Revision 1

Reference: See page 2

Dear Mr. Smith:

Ecology recognizes and appreciates the submittal of the *Tier 1 Closure Plan SST System*, RPP-RPT-58858, Revision 1 (reference 1), in partial completion of Hanford Federal Facility Agreement and Consent Order (HFFACO) Milestone M-045-82 requirements. This milestone, currently in dispute, requires the United States Department of Energy (USDOE) to: "Submit complete permit modification requests for Tiers 1, 2, & 3 (see Appendix I) of the SST System, to support final closure requirements for WMA C." USDOE submitted only a Tier 1 Closure Plan SST System with references.

Ecology has determined that the Tier 1 Closure Plan SST System, RPP-RPT-58858, Revision 1, does not provide sufficient information to complete a modification to the Hanford Site-Wide Permit for the Single-Shell Tank System. Because these unfit-for-use tanks will continue to store a large volume of waste for a number of decades (Milestone M-045-00), the *Tier 1 Closure Plan SST System* must contain details of the information identified in HFFACO Appendix I (*SST System Waste Retrieval and Closure Process*) and information demonstrating tank waste will be safely managed during this extended closure period to ensure ongoing protection of human health and the environment (Washington Administrative Code 173-303-610(4)).

The enclosure provides comments based on our initial review, and identifies the subject matter required to complete the review and permit modification process included in HFFACO Appendix I, Section 9.2 (Document Review and Comment Process). Because Ecology finds the scope of the submitted Tier 1 Closure Plan SST System insufficient, our attached comments should not be considered a final review. Rather, comments are provided as an initial review of the information gaps we have identified for the Tier 1 Closure Plan SST System.

Also, because USDOE references the USDOE submittal of the *Clean Closure Practicability Demonstration for the Single-Shell Tanks*, DOE/ORP-2014-02, Ecology will provide a separate response letter to that submittal (reference 2).



Mr. Kevin W. Smith  
April 11, 2016  
Page 2

16-NWP-066

After USDOE has reviewed our comments, Ecology requests a meeting to further discuss our concerns, identify additional details of the information needed, and develop a path forward for finalizing the Tier 1 Closure Plan SST System and providing a complete permit modification submittal.

Please contact me at [jeff.lyon@ecy.wa.gov](mailto:jeff.lyon@ecy.wa.gov) or (509) 372-7914 to plan a meeting, or if you have questions.

Sincerely,



Jeffery Lyon  
Tank Systems Operations and Closure Project Manager  
Nuclear Waste Program

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Enclosure: Review Comments for Tier 1 Closure Plan Single-Shell Tank System

Reference 1: Letter 15-ECD-0042, dated September 30, 2015, "Submittal of the Tier 1 Closure Plan for the Single-Shell Tank System"

Reference 2: Letter 15-NWP-103, dated June 3, 2015, "Letter 14-ECD-0030, dated July 23, 2014, from K. W. Smith, USDOE-ORP, to J. A. Hedges, Ecology, "Transmittal of Clean Closure Practicability Demonstration for the Single-Shell Tanks, DOE/ORP-2014-02"

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**Enclosure - Review Comments on Tier 1 Closure Plan Single-Shell Tank System**



## **1.1 GENERAL COMMENTS**

The Tier 1 Closure Plan SST System must describe the following:

1. How closure of the SSTs and ancillary equipment will be integrated with:
  - a. Cleanup of contaminated soil and groundwater; (soil cleanup through Remedial Investigation/Corrective Measures Study process, and groundwater cleanup through a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Record of Decision);
  - b. Planning for integrating overall Central Plateau cleanup actions;
  - c. The Closure Plan SST System (Tiers 1, 2, and 3), and incorporation of these decisions in the Site-Wide Permit.
2. Results of the clean closure practicability demonstration for the single-shell tanks, and performance assessment (per HFFACO, Appendix I) in the Tier 1 Closure Plan SST System.
3. Processes described in the SST WMA C Resource Conservation and Recovery Act/CERCLA integration white paper.
4. How HFFACO Appendix H, Single Shell Tank Waste Retrieval Criteria Procedure will be implemented.
5. Other regulatory requirements for closure, and how they are met, including the High Level Waste-Waste Incidental to Reprocessing determinations for contaminated soils and tank residuals (HFFACO Appendix I, sections 2.5 and 3.1).
6. Given the extensive schedule for closure, information demonstrating USDOE has taken, and will continue to take, all steps to ensure threats to human health and the environment are prevented while closure proceeds.

## **1.2 SPECIFIC COMMENTS**

1. USDOE submitted only the Tier 1 portion of the Closure Plan SST System (with references). Ecology considers the related SST System closure correspondence and other documentation, indicated in the list below, relevant to our review process. The items below should be included as reference material, and the Tier 1 Plan should include an explanation, context and basis for applicability of this information:
  - a. Letter dated August 15, 2006, from J. A. Hedges, Ecology, to R. J. Schepens, USDOE-ORP, "Letter 06-TPD-050, dated July 31, 2006, from R. Schepens, USDOE, to J. Hedges, Ecology, "Request for Temporary Suspension of Single-Shell Tank (SST) System Closure Plan Submittals"
  - b. Letter 04-TPD-092, dated September 28, 2004, from R. J. Schepens, USDOE-ORP, to M. A. Wilson, Ecology, "Submittal of Single-Shell Tank (SST) System Closure Plans to Fulfill Requirements for Hanford Federal Facility Agreement and Consent Order (HFFACO) Milestones M-45-06B and M-45-06C"

- c. Letter dated September 13, 2004, from J. Lyon, Ecology, to R. J. Schepens, USDOE-ORP, "Single-Shell Tank Permit Application: Single-Shell Tank System Closure Plan, RPP-13774, Rev. 2," dated January 19, 2004"
  - d. Letter dated April 5, 2004, from J. Lyon, Ecology, to R. J. Schepens, USDOE-ORP, "Single-Shell Tank 241-C-106"
  - e. Letter 04-TPD-010, dated January 19, 2004, from R. J. Schepens, USDOE-ORP, to M. A. Wilson, Ecology, "Submittal of Single-Shell Tank (SST) System Closure Plan Revision 2"
2. Information identified for submittal in the Draft Hanford Facility Dangerous Waste Permit, Revision 9, SST System Closure Unit Group 4 chapter permit conditions is needed to support a complete permit modification request for incorporating the SST System into the Site-wide Permit. Some of the information is needed to inform closure decisions (e.g., process information). Some of the information requirements are needed in support of the extended closure period to ensure continued protection of human health and the environment from the unclosed but not operating tank systems (e.g., security, monitoring and inspections, training, preparedness and prevention). While some of this information is discussed generally in Section 1.1 of the Tier 1 Closure Plan, this information needs to be detailed and submitted for inclusion in the Site-wide Permit as part of the permit modification request.
  3. When the requirement for a Tier 1 Closure Plan was added to the HFFACO, there was an expectation that specific goals and cleanup actions would be clearly defined (coordinated and integrated) regarding closure of the SST System and associated groundwater units.
    - a. For the practicability demonstration (Clean Closure Practicability Demonstration for the Single-Shell Tanks, DOE/ORP-2014-02), it is important that USDOE provide a complete description of the evaluation and decisions for each WMA in the Tier 1 Closure Plan submittal.
    - b. The Tier 1 Closure Plan SST System must specifically provide a complete description of the coordination and integration for groundwater mitigation as described in the HFFACO, Appendix I. Without a proposed remedy for the 200-BP-5 and 200-PO-1 groundwater operable units (OUs), the Tier 1 SST System Closure Plan submittal must address how coordination and integration of groundwater cleanup with closure of the single-shell tank waste management areas (WMAs) will be conducted. Contamination from WMA C has already reached the groundwater in both the 200-BP-5 and 200-PO-1 groundwater OUs, and will continue to migrate to both of these groundwater units. Supporting closure documents (*such as Performance Assessments (PAs) and Remedial Feasibility Investigations (RFIs)*) must also contain detailed information on the groundwater impacts to 200-BP-5 and 200-PO-1 groundwater OUs from all WMA C sources (*such as soils, tank residuals, and ancillary equipment*). The HFFACO milestones M-015-21A and M-045-82, both due in 2015, would have provided an understanding of the coordination and integration for groundwater mitigation with an SST System closure. However, no proposed plans were submitted for milestone M-015-21A.

4. The 2015 Closure Plan must include definitions of key terms. Ecology recommends using "Key Definitions" from the 2004 Closure Plan, previously reviewed and accepted by Ecology.
5. The 2015 Closure Plan does not define the scope of an SST System closure, and seems to interpret closure of the SST System as not including treatment or removal of contaminated soils and groundwater. This approach is not consistent with the 2004 Closure Plan or Draft Revision 9, Site-Wide Permit condition V.4.G.1.a.
  - The SST permit condition V.4.G.1.a states: "*The Permittees will close the entire SST System, including tanks, ancillary equipment, contaminated soil, and contaminated groundwater, in accordance with the closure performance standards...*"
6. Ecology recognizes that groundwater remediation will be performed pursuant to a CERCLA ROD, developed for an associated groundwater operable unit. However, the Resource Conservation and Recovery Act closure process will be the principal regulatory mechanism for addressing environmental releases associated with the tank farms. Therefore, the 2015 Tier 1 SST System Closure Plan must include the groundwater operable unit process description that will address corrective measures for groundwater as applicable to releases of contamination from individual WMAs. This may include corrective measures specific to a WMA or a set of WMAs, along with closure and post-closure groundwater monitoring systems developed to monitor corrective measures for each WMA.
7. 2015 Closure Plan, Section 1, last paragraph. This section should be expanded to summarize the general content and incorporation of the Tier 1, Tier 2, and Tier 3 closure plans, similar to the Preface of the 2004 Closure Plan:
  - "*Tier 1 - Framework Plan for Single-Shell Tank System Closure*: Referred to as the Framework Plan, ... provides a general overview of the single-shell tank system, a general description of the administrative framework and process for closure, including key definitions, and a description of the process for incorporating Tier 2 and Tier 3 with *soil and groundwater corrective actions*, single-shell tank closure performance standards, an overall closure schedule, and an overall description of the certification and post-closure process."
8. 2015 Closure Plan, page 2-2, last paragraph. Define the "operable unit" referenced in this paragraph. Also, revise this paragraph to reflect that contaminated groundwater must be addressed as part of SST System closure, according to the closure performance standard specified in the SST System permit (chapter), permit condition V.4.G.2 (Closure Performance Standards).
9. 2015 Closure Plan, Section 3.2, 2<sup>nd</sup> paragraph. Describe all applicable measures that will be used to protect human health and the environment, rather than referring to "previously described measures..."
10. 2015 Closure Plan, Section 3.2. Describe what groundwater-specific measures will be taken to protect human health and the environment.

11. 2015 Closure Plan, Section 3.2, page 3-3, does not include inspection procedures (see Site-Wide Permit and the 2004 Closure Plan).
12. The 2015 Tier 1 Closure Plan should address treatment, storage, and disposal of retrieved SST System waste. Include a discussion analogous to that found in the 2004 Closure Plan, Section 3.2.2, and a flow chart similar to Figure 3-2.
13. The 2015 Tier 1 Closure Plan should address management of waste generated during remediation and closure of tank systems, including applicability of land disposal restrictions regulations, similar to that found in Section 3.4 of the 2004 Closure Plan.
14. The 2015 Tier 1 Closure Plan should describe the SST System risk evaluation and performance assessment, analogous to that found in Section 4 of the 2004 Closure Plan (SST System Risk Evaluation). The two short paragraphs in Section 4 of the current (2015) closure plan are not an adequate substitute for the 26 pages of detailed discussion in the 2004 closure plan.
15. The 2015 Tier 1 Closure Plan should include a discussion of characterization of individual WMAs, and the SST System for closure, analogous to Section 5 in the 2004 Closure Plan.
16. Ecology recognizes that a schedule is currently under negotiation. However, the current (2015) Tier 1 Closure Plan needs to further include:
  - Discussion of planning and scheduling for SST closure actions;
  - A mechanism showing how to update schedules in closure plans;
  - A high-level description of the HFFACO M-45-00 Milestone series;
  - A flowchart illustrating implementation of these activities.